

ABSTRACT

BACKGROUND:

Cervical cancer is the second most common in women and the leading cause of cancer mortality in women in developing countries.

Cervical cancer screening by Pap smear can diagnose preneoplastic and neoplastic lesions of cervical cancer which can be easily and effectively treated. Though Pap smear is the most frequently employed test in mass screening programs, it is always not feasible, it requires trained technicians, cytologists and good laboratories for mass screening. Colposcopy and colposcopic biopsy are adequate, safe and sufficient techniques for the diagnosis of premalignant and malignant lesion of the carcinoma cervix but requires extensive training and experience. Micronucleus assay is a rapid and reliable technique which can detect genetic instabilities and contribute to cancer screening methods.

KEYWORDS

Cervical carcinoma, Micronucleus, colposcopy, micronucleus assay, CIN I, CIN II, CIN III, chronic cervicitis.

AIMS AND OBJECTIVES:

1. To study the presence of micronucleus in urothelial cells of patients with abnormal colposcopy ;
- 2.To correlate with their colposcopic and histopathological findings.

MATERIALS AND METHODS::

This is a one year prospective study conducted in Institute of Obstetrics and Gynecology, Madras Medical College. 50 VIA/VILI negative and 58 VIA/VILI positive patients were randomly selected. A midstream urine sample

of 5ml is collected in aseptic vials of these 108 patients attending colposcopic clinic. These are processed within 3 to 4 hours of sample collection. The samples are washed in phosphate buffered saline with alternate centrifugations at 1200 rpm for 10 minutes. The pellets are smeared over the precleaned glass slides. The slides are air dried and kept in the fixative of methanol for 20 minutes. The slides are stained with May Graunwald's and Giemsa stain and mounted in DPX. The stained and washed slides are observed for nuclear abnormalities under bright field Olympus microscope and observations recorded. VIA/VILI positive patients were subjected to cervical biopsy and sent for histopathological examinations. The micronuclei assay is correlated with their colposcopic and histopathological findings.

RESULTS:

The sensitivity of micronuclei assay was 82.76% and sensitivity was 90%.

The assay correlated with the colposcopic and histopathological findings and it was found to be statistically significant.

CONCLUSION:

Thus micronuclei assay can be used as a simple, reliable and cost effective screening test in detecting precursor lesions at the earliest.